



*Department of Reproductive Biology
Case School of Medicine*

*Department of Obstetrics and Gynecology
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Research Interests

The effects of antiphospholipid antibodies on pregnancy
Villous cytotrophoblast differentiation
Expression of placental endogenous retroviruses
Diagnosis and treatment of recurrent miscarriage

Training

B.A. (<i>cum laude</i>)	1969	Temple University, Philadelphia, PA, Biology
Ph.D.	1974	Temple University School of Medicine, Philadelphia, PA, Medical Microbiology and Immunology
Post-Doctoral Fellowships	1974-1976	Institute for Hygiene and Medical Microbiology, Heidelberg University School of Medicine, Heidelberg, Germany
	1976-1978	Department of Surgery, Division of Oncology, UCLA School of Medicine, Los Angeles, CA, tumor immunology

Academic and Administrative Appointments:

1978 - 1987	Associate Professor and Director, Research Laboratories	Departments of Obstetrics and Gynecology and Pathology, University of Utah School of Medicine, Salt Lake City, UT
1987 - 1990	Professor (Tenure) and Chair	Department of Applied Medical Sciences, University of Southern Maine, Portland, ME; and Director of Reproductive Immunology, Foundation for Blood Research, Scarborough, ME
1990 - 2001	Professor (Tenure) and Chair	Department of Microbiology and Immunology; Professor of Obstetrics and Gynecology and Biological Sciences; and Associate Dean for Graduate Programs (2000-2001), School of Medicine and College of Science and Mathematics, Wright State University, Dayton, OH
2001 - Present	Professor (Tenure)	Departments of Reproductive Biology and Pathology, Case School of Medicine, Case Western Reserve University, Cleveland, OH
2001 - Present	Director, Division of Research	Department of Obstetrics and Gynecology, MetroHealth Medical Center (2001-2004) and Department of Obstetrics and Gynecology, MacDonald Women's Hospital, University Hospitals (2004-present)
2004 - Present	Vice Chair for Academic Affairs	Department of Obstetrics and Gynecology, MacDonald Women's Hospital, University Hospitals

Recent Publications:

Rote NS, Stetzer B. Autoimmune disease as a cause of reproductive failure. In *Prenatal Testing*, ed J. Canick, *Clinics in Laboratory Medicine*, 23:265-293, 2003.

Das M, Xu B, Lin L, Chakrabarti S, Shivaswamy V, Rote NS. Phosphatidylserine efflux and intercellular fusion in a BeWo model of human villous cytotrophoblast. *Placenta*, 25:396-407, 2004.

Rote NS, Chakrabarti S, Stetzer B. The role of endogenous retroviruses in human placental development. *Placenta*, 25:673-683, 2004.

González F, Minium J, Rote NS, Kirwan JP. Hyperglycemia alters tumor necrosis factor- α release from mononuclear cells in women with polycystic ovary syndrome. *Journal of Clinical Endocrinology and Metabolism*, 90:5336-5342, 2005.

González F, Minium J, Rote NS, Kirwan JP. Altered tumor necrosis factor- α release from mononuclear cells of obese reproductive age women during hyperglycemia. *Metabolism* 55:271-277, 2006.

González F, Rote NS, Minium J, Kirwan JP. Reactive oxygen species-induced oxidative stress in the development of insulin resistance and hyperandrogenism in polycystic ovary syndrome. *Journal of Clinical Endocrinology and Metabolism*, 91:336-340, 2006.

González F, Rote NS, Minium J, Kirwan JP. In vitro evidence that hyperglycemia stimulates tumor necrosis factor- α release in obese women with polycystic ovary syndrome. *Journal of Endocrinology*, 188:521-529, 2006.

González F, Rote NS, Minium J, Kirwan JP. Increased activation of nuclear factor κ B triggers inflammation and insulin resistance in polycystic ovary syndrome. *Journal of Clinical Endocrinology and Metabolism*, 91:1508-1512, 2006.

Alpin JD, Straszewski-Chavez SL, Kalionis B, Dunk C, Morrish D, Forbes K, Baczyk D, Rote N, Malassine A, Knofler M. Trophoblast differentiation: progenitor cells, fusion, and migration: A workshop report. In *Trophoblast Research Placenta: From Molecule to Morphology to Mother*. (eds F Lyall, G Desoye, K Shiverick), Elsevier Ltd., Amsterdam, *Placenta (Suppl 1)*:141-143, 2006.

Recent Extramural Funding:

Antiphospholipid Antibody Heterogeneity, July 1, 2003 – April 30, 2008, NIH, RO1 HD043566, PI: Neal S. Rote

Antibody-directed Targeting of Ovarian Cancer Blood Vessels, March 15, 2006 – March 14, 2008, OROC (Out Run Ovarian Cancer) Advocacy and Research Group PI: Neal S. Rote, Co-Investigators: Vivian von Gruenigen, M.D., Steven Waggoner, M.D.

Placental Endogenous Retrovirus Expression, February 1, 2003 – January 31, 2006, RO3 HD043546, PI: Neal S. Rote

Antiphospholipid Antibodies and Pregnancy Loss, August 1, 1988 - March 31, 2003, RO1 HD23697, PI: Neal S. Rote